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ABSTRACT

Three studies are described which compared the effects of headings in text in the form of questions with headings in the form of statements on the immediate factual recall of low-ability pupils in England. The first experiment used approximately 190 pupils, ages 11-12; the second used approximately 110 low-ability pupils, ages 14-15; and the third used approximately 140 low-ability pupils, ages 14-15. Each pupil read a 1,000 word passage, with either statement headings or question headings, and completed a factual recall test. The reading passage for the first two experiments had a Flesh Reading Ease (RE) Score of 84 ("fairly easy"). The third experiment's passage had a Flesh RE Score of 55 ("fairly difficult"). In contrast with earlier studies with smaller numbers of participants, no significant differences were found in favor of question headings. (BS)

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The Effects of Question or Statement Headings in Text on the Recall of Low-ability Pupils

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Abstract

Three studies are described which compared the effects of headings in the form of questions with headings in the form of statements on the immediate factual recall of low-ability pupils. The studies varied the difficulty and/or the age groups used. The studies differed from earlier ones in that the number of participants was much larger. In contrast with the earlier studies, in these three studies no significant differences were found in favour of questions.

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Introduction

The question of whether there may be an interaction between levels of ability and the presence or absence of adjunct aids in learning from text is an interesting one. Several researchers have indicated that such aids are particularly helpful for low-ability readers (e.g. Shavelson et al., 1974; Watts, 1975; Rickards and Hatcher, 1977; Wilhite, 1983). Some have found the reverse (e.g. Hartley, 1973; Sanders, 1973), and indeed others have suggested that some kinds of aids might aid the performance of less-able participants whilst impairing the performance of more-able ones (e.g. Berliner, 1971). In reviewing this research one is struck by how easily one can alter the nature of the findings by varying the difficulty of the learning materials, the nature of the adjunct aids, and the kinds of measures used (e.g. see also Prosser, 1974; Koran and Koran, 1975; Hartley and Davies, 1976).

Research on the effects of headings in text has not directly focused on this issue (see Hartley and Jonassen, 1974 for a review). Indeed, the research described in this paper examines a slightly different question : this is whether or not different kinds of headings (statements or questions) might interact with different levels of ability. Previous research carried out by the main author and his colleagues (Hartley et al., 1980; Hartley et al., 1981) showed that less-able pupils recalled significantly more from text with headings written in the form of questions than they did from texts with headings written in the form of statements. These studies were limited, however, in that they used short texts (about 350 words) and small sample sizes (no more than 10 in each group). In a third study (Hartley and Trueman, 1983) a longer

text was used (about 1,000 words) but again with a small sample size. The results lay in the same direction, but this time they were not significant.

One particular problem with all of our studies so far has been that our definition of low-ability has been both inconsistent and somewhat crude (largely because low-ability has been a side issue). So far we have usually accepted the schools' designation of low-ability (and this can vary - and has indeed varied - in different schools).

In this paper we report the results of three additional experiments on this question - experiments which were designed to study it more thoroughly.

Experiment 1

In Experiment 1 two schools participated and approximately 190 pupils aged between 11 and 12 years were allocated at random into one of three conditions - reading a 1,000 word passage on the Life of Louis Braille (Flesch RE score of 84, i.e. 'fairly easy') (i) with headings in the form of questions, or (ii) with headings in the form of statements, or (iii) without headings. Each pupil was asked to read through the passage once only and then to complete a twelve item factual recall test. Following this the pupils completed a cloze-type reading test devised by the authors (which was a composite of the GAP and the GAPADOL tests devised by McLeod and Unwin, 1970 and McLeod and Anderson, 1973).

The sample was divided (on the basis of the reading test scores) into a group of high and low-ability pupils, and the low-ability pupils were further sub-divided into upper and lower sub-groups. The results obtained from the two low-ability groups with headings in the form of questions and headings in the form of statements are shown in Table 1.

There were no significant differences between pupils studying the text with headings in the form of questions and pupils studying the text with headings in the form of statements in either of the two sub-groups.

Experiment 2

In Experiment 2 three schools participated and approximately 110 low-ability pupils (as designated by the schools) aged between 14 and 15 years were allocated at random into one of two conditions - reading the Louis Braille passage with headings either in the form of questions or in the form of statements. Each pupil was asked to read through the passage once only and then to complete a ten item factual recall test. Each pupil also completed the composite reading comprehension test.

The sample was then sub-divided into two low-ability groups (an upper and a lower one) based on the median reading test score. The results obtained are shown in Table 1. There were no significant differences between pupils studying the text with headings in the form of questions and pupils studying the text with headings in the form of statements in either of the two sub-groups.

Experiment 3

In Experiment 3 four schools participated and approximately 140 low-ability pupils aged between 14 and 15 years were allocated at random into one of two conditions - reading a 1,000 word passage on televiewing habits (Flesch RE score of 55, i.e. 'fairly difficult') with headings in the form of questions or with headings in the form of statements. Each pupil was asked to read through the passage once only and then to complete a twelve item factual recall test. Each pupil also completed the GAPADOL reading test (McLeod and Anderson, 1973). This particular test provides a reading age for each respondent and is more suited to these older pupils.

The average reading age of the sample was 13 years 10 months (S.D. $\pm$ 30.6 months). This indicates that the pupils in this sample were of generally low-ability. However, some forty percent (N = 58) of its members had a reading age which was equal to, or in excess of, their chronological age. As these subjects were clearly not of 'low-ability' they were omitted from further consideration. The average reading age of the remaining 82 pupils was 11 years 11 months.

Once again we split this sample into sub-samples of low-ability pupils. The results obtained from this enquiry are also shown in Table 1. Once again there were no significant differences between pupils studying the text with headings in the form of questions and pupils studying the text with headings in the form of statements in either of the two sub-groups.

Conclusions

In these three studies, with larger sample sizes and with better measures of ability we have failed to find any significant differences between the recall of low-ability pupils reading text with headings in the form of questions and low-ability pupils reading text with headings in the form of statements. In five of the six comparisons reported in Table 1 however, the groups with headings in the form of questions did do slightly better than the groups with headings in the form of statements but these differences were so small that it is probably unwise to attach too much importance to them (despite the earlier findings of the main author and his colleagues). To conclude: it would seem that we might not expect differential effects between different kinds of headings with low-ability participants, but that headings *per se* might sometimes produce them.

Table 1. The results from three experiments on the effects of different kinds of headings (questions vs statements) on the recall of low-ability pupils.

Experiment 1. Easy text : 11-12 year old respondents

	Headings in the form of questions	Headings in the form of statements
Low-ability Group 1	$\bar{x}$ 8.4 N (17)	$\bar{x}$ 8.0 N (19)
Low-ability Group 2	$\bar{x}$ 6.6 N (16)	$\bar{x}$ 6.5 N (12)

Experiment 2. Easy text : 14-15 year old respondents

	Headings in the form of questions	Headings in the form of statements
Low-ability Group 1	$\bar{x}$ 8.3 N (26)	$\bar{x}$ 8.8 N (31)
Low-ability Group 2	$\bar{x}$ 7.7 N (28)	$\bar{x}$ 6.9 N (23)

Experiment 3. Difficult text : 14-15 year old respondents

	Headings in the form of questions	Headings in the form of statements
Low-ability Group 1	$\bar{x}$ 5.5 N (19)	$\bar{x}$ 4.9 N (23)
Low-ability Group 2	$\bar{x}$ 5.3 N (26)	$\bar{x}$ 4.9 N (14)

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